CONTENTS OF VOLUME 94

JANUARY 1990 VOLUME 94 NUMBER 1

IN THIS ISSUE . . .

1 Jean L. Marx

HISTORICAL PERSPECTIVE

3 **A Tribute to the Three Major Societies of Investigative Dermatology on the Occasion of Their First Joint Meeting** Karl Holubar

REPORTS

6 **Heterogeneity in Harlequin Ichthyosis, an Inborn Error of Epidermal Keratinization: Variable Morphology and Structural Protein Expression and a Defect in Lamellar Granules** Beverly A. Dale, Karen A. Holbrook, Philip Fleckman, Janet R. Kimball, Steve Brumbaugh, and Virginia P. Sybert

19 **Protooncogene Expression in Normal and Psoriatic Skin** James T. Elder, Amir Tavakkol, Susan B. Klein, Mary E. Zeigler, Max Wicha, and John J. Voorhees

26 **Immunosuppression by Factors Released from UV-Irradiated Epidermal Cells: Selective Effects on the Generation of Contact and Delayed Hypersensitivity After Exposure to UVA or UVB Radiation** Tae-Yoon Kim, Margaret L. Kripke, and Stephen E. Ullrich

33 **Suppression of Ornithine Decarboxylase Gene Expression by Retinoids in Cultured Human Keratinocytes** David R. Olsen, Noreen J. Hickok, and Jouni Uitto

37 **T-Cell Receptor $\gamma\delta$ Bearing Cells in Normal Human Skin** Jan D. Bos, Marcel B.M. Teunissen, Irina Cairo, Suze R. Krieg, Martien L. Kapsenberg, Pranab K. Das, and Jannie Borst

43 **Keratinocyte Prostaglandin Synthesis Is Enhanced by IL-1** Alice P. Pentland and Mÿ G. Mahoney

47 **Retinoic Acid Inhibits the Production of Collagenase by Human Epidermal Keratinocytes** Catherine Bailly, Sophie Drèze, Daniel Asselineau, Betty Nusgens, Charles M. Lapière, and Michel Darmon

52 **Inhibition of Autoimmune Disease in a Murine Model of Systemic Lupus Erythematosus Induced by Exposure to Syngeneic Photoinactivated Lymphocytes** Carole L. Berger, Maritza Perez, Liliane Laroche, and Richard Edelson

58 **Modulation of the Binding and Endocytosis of Concanavalin A by Guinea Pig Keratinocytes: Reversible Antagonistic Effects of Cholesterol and Phospholipid-Liposomes** Theresa M. Callaghan, Philippe Metezeau, Hélène Gachelin, Gérard Redziniak, Yoram Milner, and Michel E. Goldberg

65 **Distribution of Two Basement Membrane Proteoglycans Through Hair Follicle Development and the Hair Growth Cycle in the Rat** John R. Couchman, Jeffrey L. King, and Kevin J. McCarthy

71 **The Antipsoriatic Compound Anthralin Influences Bioenergetic Parameters and Redox Properties of Energy Transducing Membranes** Jürgen Fuchs, Wolfgang H. Nitschmann, and Lester Packer

77 **Binding of Antibodies to the Extractable Nuclear Antigens SS-A/Ro and SS-B/La Is Induced on the Surface of Human Keratinocytes by Ultraviolet Light (UVL): Implications for the Pathogenesis of Photosensitive Cutaneous Lupus** Fukumi Furukawa, Mari Kashihara-Sawami, Martin B. Lyons, and David A. Norris

86 **Levels of Cytochrome P-450-Mediated Aryl Hydrocarbon Hydroxylase (AHH) are Higher in Differentiated than in Germinative Cutaneous Keratinocytes** Jin-feng Guo, Raya Brown, Charles E. Rothwell, and Isadore A. Bernstein

94 **Immune Function, Mutant Frequency, and Cancer Risk in the DNA Repair Defective Genodermatoses Xeroderma Pigmentosum, Cockayne's Syndrome, and Trichothiodystrophy** Paul G. Norris, G. Astrid Limb, Anne S. Hamblin, Alan R. Lehmann, Colin F. Arlett, Jane Cole, Alastair P.W. Waugh, and John L.M. Hawk

101 **UVB-Induced Epidermal Hyperproliferation Is Modified by a Single, Topical Treatment with a Mitosis Inhibitory Epidermal Pentapeptide** Wenche Marie Olsen and Kjell Elgjo

107 **The Distinctive Pattern of Proteoglycan and Glycosaminoglycan Free Chain Synthesis by Cultured Human Epidermal Keratinocytes** Michael Piepkorn, Philip Fleckman, Helen Carney, Peter Hovingh, and Alfred Linker

114 **Quantitative Evaluation of Melanoma Cell Invasion in Three-Dimensional Confrontation Cultures In Vitro Using Automated Image Analysis** Josef Smolle, Christine Helige, Hans-Peter Soyer, Stefan Hoedl, Helmut Popper, Haro Stettner, Helmut Kerl, Helmut A. Tritthart, and Hans Kresbach

120 **Serotonin Metabolism in the Arthus Reaction** Takao Tachibana, Shinkichi Taniguchi, Fukumi Furukawa, Soichi Miwa, and Sadao Imamura

126 **Trans Retinoic Acid Enhances the Growth Response of Epidermal Keratinocytes to Epidermal Growth Factor and Transforming Growth Factor Beta** Philip S. Tong, Nancy N. Horowitz, and Larry A. Wheeler

132 **Vitamin A Esterification in Human Epidermis: A Relation to Keratinocyte Differentiation** Hans Törmä and Anders Vahlquist

139 **Type IV Collagen and Fibronectin Enhance Human Keratinocyte Thymidine Incorporation and Spreading in the Absence of Soluble Growth Factors** David T. Woodley, Kimberly C. Wynn, and Edward J. O'Keefe

144 **Phototoxic Erythema Following PUVA Treatment: Independence of Complement** Astrid D. Rauterberg, Ernst G. Jung, Reinhard Burger, and Ernst W. Rauterberg

RAPID COMMUNICATION

150 **5 α-Reductase Activity in Cultured Human Dermal Papilla Cells from Beard Compared with Reticular Dermal Fibroblasts** Satoshi Itami, Sotaro Kurata, and Susumu Takayasu

LETTERS TO THE EDITOR

153 **Adverse Effect of Lignocaine (Lidocaine) on Skin Destined for Tissue Culture** Christopher M.E. Rowland Payne, Christopher N. Connolly, Richard C.D. Staughton, Jackie B. Weiss, and Ariel F. Lant

153 **UVB Irradiation Induces Melanocyte Increase in Both Exposed and Shielded Human Skin** Steven R. Kohn

154 **Reply** Ulrika Stierner

0022-202X/90/$03.50 Copyright © 1990 by The Society for Investigative Dermatology, Inc.

BOOK REVIEWS

155 **Benchmarks: Alternative Methods in Toxicology. Edited by M.A. Mehlman** Steven T. Boyce

155 **Sterol Biosynthesis Inhibitors—Pharmaceutical and Agrochemical Aspects. Edited by D. Berg and M. Plempel** J. Fransen

156 **Regulatory Control and Standardization of Allergenic Extracts: Fifth International Paul-Ehrlich-Seminar, September 2–4, 1987, Frankfurt. Edited by Reinhard Kurth** Johannes Ring

156 **Diagnosis and Treatment of Common Skin Diseases. Konrad Bork and Wolfgang Bräuninger** Joseph Yohn

FEBRUARY 1990 VOLUME 94 NUMBER 2

IN THIS ISSUE . . .

157 Jean L. Marx

REPORTS

159 **Free Sphingosine in Human Epidermis** Philip W. Wertz and Donald T. Downing

162 **Inhibition of Benzoyl Peroxide-Mediated Tumor Promotion in 7,12-Dimethylbenz(a)anthracene-Initiated Skin of Sencar Mice by Antioxidants Nordihydroguaiaretic Acid and Diallyl Sulfide** Mohammad Athar, Haider Raza, David R. Bickers, and Hasan Mukhtar

166 **Human Epidermal Langerhans Cells Undergo Profound Morphologic and Phenotypical Changes During In Vitro Culture** M. B. M. Teunissen, J. Wormmeester, S. R. Krieg, P. J. Peters, I. M. C. Vogels, M. L. Kapsenberg, and J. D. Bos

174 **Antigen Dynamics in Melanocytic and Nevocytic Melanoma Oncogenesis: Anti-Ganglioside and Anti-*ras* p21 Antibodies as Markers of Tumor Progression** Keizo Yamamura and Yutaka Mishima

183 **Analysis of Adenovirus Early and Late Gene Expression in Cultured Epidermal Keratinocytes** Brian J. Aneskievich, Joseph I. Lee, and Lorne B. Taichman

187 **Increased Collagen Synthesis Accompanying Elevated m-RNA Levels in Cultured Werner's Syndrome Fibroblasts** Masami Arakawa, Atsushi Hatamochi, Koji Takeda, and Hiroaki Ueki

191 **Regulation of Elastin Gene Expression: Evidence for Functional Promoter Activity in the 5′-Flanking Region of the Human Gene** Michael J. Fazio, Veli-Matti Kähäri, Muhammad M. Bashir, Biagio Saitta, Joel Rosenbloom, and Jouni Uitto

197 **Transcription and Expression of Transforming Growth Factor Type Beta in the Skin of Progressive Systemic Sclerosis: A Mediator of Fibrosis?** Matthias Gruschwitz, Pia U. Müller, Norbert Sepp, Erhard Hofer, Adriano Fontana, and Georg Wick

204 **UVB Radiation and Human Monocyte Accessory Function: Differential Effects on Pre-Mitotic Events in T-Cell Activation** Jean Krutmann, Gary M. Kammer, Zahra Toossi, Robert L. Waller, Jerrold J. Ellner, and Craig A. Elmets

210 **Involucrin-Like Proteins in Non-Primates** J. Kubilus, S. B. Phillips, M. A. Goldaber, J. C. Kvedar, and H. P. Baden

216 **Evidence that Cell Shedding from Plantar Stratum Corneum In Vitro Involves Endogenous Proteolysis of the Desmosomal Protein Desmoglein I** Anita Lundström and Torbjörn Egelrud

221 **Characterization of a Human Melanosome-Associated Antigen Recognized by Monoclonal Antibody, HMSA-2** Kazuo Maeda, Walter T. Dixon, and L. Martin Jerry

227 **Distribution of Superoxide Dismutase Activity in the Epidermis: Measurement with Electron Spin Resonance Spin Trapping** Ryohei Ogura, Hiroshi Ueta, Masayasu Sugiyama, and Toshihiro Hidaka

230 **Cultured Porcine Epithelial Grafts: An Improved Method** Sigrid Regauer and Carolyn Compton

235 **Shed Snake Skin and Hairless Mouse Skin as Model Membranes for Human Skin During Permeation Studies** Pauline Carole Rigg and Brian William Barry

241 **Formation of DNA Adducts in the Skin of Psoriasis Patients, in Human Skin in Organ Culture, and in Mouse Skin and Lung Following Topical Application of Coal-Tar and Juniper Tar** Bernadette Schoket, Irén Horkay, Ágnes Kósa, László Páldeák, Alan Hewer, Philip L. Grover, and David H. Phillips

247 **Effect of Aging on Epidermal Dendritic Cell Populations in C57BL/6J Mice** Eli Sprecher, Yechiel Becker, Georg Kraal, Elaine Hall, David Harrison, and Leonard D. Shultz

254 **Differentiation Between Lymphomas and Pseudolymphomas of the Skin by Computerized DNA-Image Cytometry** Wilhelm Stolz, Thomas Vogt, Otto Braun-Falco, Wolfgang Abmayr, Fritjof Eckert, Peter Kaudewitz, Dieter Vieluf, Kristina Bieber, and Günther Burg

RAPID COMMUNICATION

261 **Intra-Epidermal Retention of Type VII Collagen in a Patient with Recessive Dystrophic Epidermolysis Bullosa** Lynne T. Smith and Virginia P. Sybert

MARCH 1990 VOLUME 94 NUMBER 3

IN THIS ISSUE . . .

265 Jean L. Marx

REPORTS

267 **Cutaneous Dermal Ia$^+$ Cells Are Capable of Initiating Delayed Type Hypersensitivity Responses** Yardy Tse and Kevin D. Cooper

273 **UVB Radiation and DNFB Skin Painting Induce Suppressor Cells Universally in Mice** Marcia J. Glass, Paul R. Bergstresser, Robert E. Tigelaar, and J. Wayne Streilein

279 **Androgen Excess in Women with Acne Alone Compared with Women with Acne and/or Hirsutism** Patrick Vexiau, Corinne Husson, Martine Chivot, Jean-Louis Brerault, Jean Fiet, Rene Julien, Jean-Marie Villette, Noah Hardy, and Gerard Cathelineau

284 **Fibrillin Immunoreactive Fibers Constitute a Unique Network in the Human Dermis: Immunohistochemical Comparison of the Distributions of Fibrillin, Vitronectin, Amyloid P Component, and Orcein Stainable Structures in Normal Skin and Elastosis** Karin Dahlbäck, Anne Ljungquist, Helge Löfberg, Björn Dahlbäck, Eva Engvall, and Lynn Y. Sakai

292 **Arachidonic Acid Metabolism Varies with the State of Differentiation in Density Gradient-Separated Mouse Epidermal Cells** Gregory S. Cameron, James K. Baldwin, Daniel W. Jasheway, Kelly E. Patrick, and Susan M. Fischer

297 **Differential Expression of Type I Hair Keratins** Arthur P. Bertolino, Daniel M. Checkla, Sheila Heitner, Irwin M. Freedberg, and Da-wen Yu

304 **Phenotypic and Functional Characterization of Tumor Infiltrating Lymphocytes in Mycosis Fungoides: Continuous Growth of CD4$^+$ CD45R$^+$ T-Cell Clones with Suppressor-Inducer Activity** Uwe Reinhold, Graham Pawelec, Alina Fratila, Sylvia Leippold, Ralf Bauer, and Hans-Wilhelm Kreysel

310 **Role of Specific Membrane Receptors in Urokinase-Dependent Migration of Human Keratinocytes** Mario Del Rosso, Gabriella Fibbi, Germana Dini, Cecilia Grappone, Marco Pucci, Riccardo Caldini, Lucia Magnelli, Michele Fimiani, Torello Lotti, and Emiliano Panconesi

317 **Adhesion Molecules on the Plasma Membrane of Epidermal Cells. II. The Intercellular Adhesion Molecule-1 Is Constitutively Present on the Cell Surface of Human Resting Langerhans Cells** Giuseppe De Panfilis, Gian Carlo Manara, Corrado Ferrari, and Claudio Torresani

322 **Measurement of Nonradioactive Isotopes of Copper in Hair with Inductively Coupled Plasma Mass Spectrometry** Maureen Dever and Randall R. Bresee

327 **Detection of Pemphigus Vulgaris and Pemphigus Foliaceus Antigens by Immunoblot Analysis Using Different Antigen Sources** Takashi Hashimoto, Marilia M. Ogawa, Akira Konohana, and Takeji Nishikawa

332 **An Optimized Freeze-Fracture Replication Procedure for Human Skin** Bert P. Holman, Ferry Spies, and Harry E. Boddé

336 **Expression of Extracellular and Intracellular Bullous Pemphigoid Antigens at the Dermal-Epibolic Junction in Organ Culture of Human Skin** Shigaku Ikeda, Hitoshi Yaguchi, and Hideoki Ogawa

341 **Enhanced Synthesis of Collagenase by Human Keratinocytes Cultured on Type I or Type IV Collagen** Marta J. Petersen, David T. Woodley, George P. Stricklin, and Edward J. O'Keefe

347 **Properties of Transdermal Histamine Iontophoresis: Differential Effects of Season, Gender, and Body Region** Walter Magerl, Rod A. Westerman, Bernd Möhner, and Hermann O. Handwerker

353 **Induction of Epidermal Hyperproliferation by Topical n-3 Polyunsaturated Fatty Acids on Guinea Pig Skin Linked to Decreased Levels of 13-Hydroxyoctadecadienoic Acid (13-Hode)** Craig C. Miller and Vincent A. Ziboh

359 **Intraepidermal Formation of Merkel Cells in Xenografts of Human Fetal Skin** Ingrid Moll, Alfred T. Lane, Werner W. Franke, and Roland Moll

365 **Evaluation of Transforming Growth Factor β and Type I Procollagen Gene Expression in Fibrotic Skin Diseases by In Situ Hybridization** Juha Peltonen, Leena Kähäri, Sirkku Jaakkola, Veli-Matti Kähäri, John Varga, Jouni Uitto, and Sergio A. Jimenez

372 **Factors Secreted by Untreated Psoriatic Monocytes Enhance Neutrophil Functions** Paolo Daniele Pigatto, Laura Bersani Pigatto, Andrea Bigardi, Gianfranco Altomare, and Aldo Fabrizio Finzi

RAPID COMMUNICATIONS

377 **Water Permeation of Reaggregated Stratum Corneum with Model Lipids** Stig E. Friberg, Ibrahim Kayali, Wayne Beckerman, Linda D. Rhein, and Anthony Simion

381 **Establishment of a Human Cutaneous T-Cell Lymphoma in C.B-17 SCID Mice** Michael R. Charley, Michael Tharp, Joseph Locker, Jau-Shyong Deng, J. Blake Goslen, Theodora Mauro, Philip McCoy, Edward Abell, and Brian Jegasothy

LETTERS TO THE EDITOR

385 **Constitutive Expression of Ia Molecules by Murine Epithelial Cells: A Comparison Between Keratinocytes and Enterocytes** Dominique Kaiserlian, Jean-François Nicolas, and Jean-Pierre Revillard

386 **Reply** Lee K. Roberts and Gerald G. Krueger

386 **Antigen-Presenting Cells in the Induction of Contact Hypersensitivity in Mice: Evidence That Langerhans Cells are Sufficient But Not Required** Ponciano D. Cruz, Jr.

387 **Reply** J. Wayne Streilein

ABSTRACTS

389 **1989 Annual Meeting of the Société Francophone de Recherche Dermatologique**

APRIL 1990 VOLUME 94 NUMBER 4

IN THIS ISSUE . . .

405 David A. Norris

REPORTS

407 **Enzymatic Distinction Between Two Subgroups of Autosomal Recessive Lamellar Ichthyosis** Mieke Bergers, Heiko Traupe, Sabine C. Dünnwald, Paul D. Mier, Renske van Dooren-Greebe, Peter Steijlen, and Rudolf Happle

413 **Adherence of Human Helper/Memory T-Cell Subsets To Psoriatic Dermal Endothelium** Yee-Hon Chin, Vincent Falanga, J. Richard Taylor, Jian-Ping Cai, and Jeroen Bax

418 **High Levels of c-*fos* Proto-Oncogene Expression in Normal Human Adult Skin** Nicole Basset-Séguin, Chantal Escot, Jean Marie Blanchard, Cecile Kerai, Bernard Verrier, Henri Mion, and Jean Jacques Guilhou

423 **Ras Oncogene Mutations in Basal Cell Carcinomas and Squamous Cell Carcinomas of Human Skin** Jan Gerrit van der Schroeff, Ludo M. Evers, Angela J.M. Boot, and Johannes L. Bos

426 **Complement Activation by Pulsed Tunable Dye Laser in Normal Skin and Hemangioma** Fabienne Gay-Crosier, Luigi L. Polla, Jürg Tschopp, and Jürg A. Schifferli

432 **In Vitro Transdermal Delivery of a Melanotropic Peptide Through Human Skin** Brenda V. Dawson, Mac E. Hadley, Norman Levine, Kristie L. Kreutzfeld, Scott Don, Ted Eytan, and Victor J. Hruby

436 **Cyclophilin Content of Normal and Psoriatic Epidermis** Christopher E.M. Griffiths, Gary J. Fisher, Matthew W. Harding, James T. Elder, and John J. Voorhees

441 **Cimetidine-Induced Augmentation of Allergic Contact Hypersensitivity Reactions in Mice** Donald V. Belsito, Francisco A. Kerdel, Jerome Potozkin, and Nicholas A. Soter

446 **High-Affinity Binding and Lack of Growth-Promoting Activity of 12(S)-Hydroxyeicosatetraenoic Acid (12(S)-HETE) in a Human Epidermal Cell Line** Eva Gross, Thomas Ruzicka, Birgit v. Restorff, Wilhelm Stolz, and Karl-Norbert Klotz

452 **BE-2 Antigen: Appearance in Activation and Long-Term Growth of T Cells** Peter W. Heald, Carole L. Berger, Teiichi Yamamura, James McNamara, and Richard L. Edelson

456 **Segmental Cell Kinetics of the Human Anagen Hair: A DNA-Flow Cytometric Analysis** Franklin Kiesewetter, Hermann Schell, Christian Seidel, Akira Arai, and Otto P. Hornstein

461 **Retinoic Acid is a Potent Inhibitor of Inducible Pigmentation in Murine and Hamster Melanoma Cell Lines** Seth J. Orlow, Ashok K. Chakraborty, and John M. Pawelek

465 **Ultrastructural Localization of Lectin-Binding Sites in Normal Skin** Gundula Schaumburg-Lever

471 **Genetic Control of Contact Photosensitivity to Tetrachlorosalicylanilide. I. Preferential Activation of Suppressor T Cells in Low Responder H-2^k Mice** Yoshiki Tokura, Takahiro Satoh, Masahiro Takigawa, and Mizuho Yamada

477 **Accelerated Epithelization Under a Highly Vapor-Permeable Wound Dressing Is Associated with Increased Precipitation of Fibrin(ogen) and Fibronectin** Marcel F. Jonkman, Eduard A. Hoeksma, and Paul Nieuwenhuis

485 **Cutaneous T-Cell Lymphoma Lesional Epidermal Cells Activate Autologous CD4$^+$ T Lymphocytes: Involvement of Both CD1$^+$OKM5$^+$ and CD1$^+$OKM5$^-$ Antigen-Presenting Cells** Erik R. Hansen, Ole Baadsgaard, Steen Lisby, Kevin D. Cooper, Kristian Thomsen, and Gunhild L. Vejlsgaard

RAPID COMMUNICATIONS

492 **Substance P Induces the Expression of an Endothelial-Leukocyte Adhesion Molecule by Microvascular Endothelium** Wendy L. Matis, Robert M. Lavker, and George F. Murphy

496 **Isotretinoin Treatment of Severe Acne Affects the Endogenous Concentration of Vitamin A in Sebaceous Glands** Anders Vahlquist, Ola Rollman, Diana B. Holland, and William J. Cunliffe

LETTERS TO THE EDITOR

499 **Inflammatory Properties of Human C5a and C5a des Arg in Mast Cell-Depleted Human Skin** Percy Lehmann

499 **Reply** Robert A. Swerlick, Kim B. Yancey, and Thomas J. Lawley

499 **Is Human Melanogenesis Stimulated by Cyclic AMP?** John M. Pawelek

500 **Reply** Barbara A. Gilchrest and Philip R. Gordon

ABSTRACTS

501 **The 1990 Annual Meeting of the Society for Investigative Dermatology, Inc.**

MAY 1990 VOLUME 94 NUMBER 5

ACKNOWLEDGMENT

601 Schering Corporation

IN THIS ISSUE . . .

602 William L. Weston

REPORTS

604 **Laser-Induced Photodynamic Therapy with Aluminum Phthalocyanine Tetrasulfonate as the Photosensitizer: Differential Phototoxicity in Normal and Malignant Human Cells In Vitro** Edward Glassberg, Lawrence Lewandowski, Gary Lask, and Jouni Uitto

611 **Two Groups of Bullous Pemphigoid Antigens Are Identified by Affinity-Purified Antibodies** Laurence J. Meyer, Ted B. Taylor, Donald P. Kadunce, and John J. Zone

617 **Production of Rabbit Antibodies Against Carboxy-Terminal Epitopes Encoded by Bullous Pemphigoid cDNA** Toshihiro Tanaka, Neil J. Korman, Hiroshi Shimizu, Robin A.J. Eady, Vera Klaus-Kovtun, Kerstin Cehrs, and John R. Stanley

624 **Epidermal and Dermal Effects of Epidermal Growth Factor During Wound Repair** Lillian B. Nanney

630 **Studies of Cicatricial Pemphigoid Autoantibodies Using Direct Immunoelectron Microscopy and Immunoblot Analysis** Philippe Bernard, Catherine Prost, Véronique Lecerf, Liliane Intrator, Patrick Combemale, Christophe Bedane, Jean-Claude Roujeau, Jean Revuz, Jean-Marie Bonnetblanc, and Louis Dubertret

636 **Value of the Cutaneous Basophil Hypersensitivity (CBH) Response for Distinguishing Weak Contact Sensitization from Irritation Reactions in the Guinea Pig** Michael K. Robinson, E. Robert Fletcher, Gary R. Johnson, William E. Wyder, and James K. Maurer

644 **Site-Specific Suppression of Cell-Mediated Immunity By Cyclosporine** Kirby S. Black, Danh K. Nguyen, Collette M. Proctor, Mayuri P. Patel, and Charles W. Hewitt

649 **Mechanisms of Cyclosporine A Inhibition of Antigen-Presenting Activity in Uninvolved and Lesional Psoriatic Epidermis** Kevin D. Cooper, Ole Baadsgaard, Charles N. Ellis, Elizabeth Duell, and John J. Voorhees

657 **A Comparison of the Effects of Antitumor Agents Upon Normal Human Epidermal Keratinocytes and Human Squamous Cell Carcinoma** Wayne M. Firestone, George B. FitzGerald, and Michael M. Wick

662 **Sensory Characteristics of Camphor** Barry G. Green

667 **Cutaneous IgA Deposits in Bullous Diseases Function as Ligands to Mediate Adherence of Activated Neutrophils** John D. Hendrix, Karen L. Mangum, John J. Zone, and W. Ray Gammon

673 **Genetic Control of Nickel Sulfate Delayed-Type Hypersensitivity** Norihisa Ishii, Harumi Ishii, Hideki Ono, Yoshihito Horiuchi, Hiroshi Nakajima, and Ichiro Aoki

677 **Expression of Protein Kinase C Isozyme in Epidermal Langerhans Cells of the Mouse** Yoh-ichi Koyama, Takahisa Hachiya, Masatoshi Hagiwara, Miya Kobayashi, Koji Ohsashi, Takeshi Hoshino, Hiroyoshi Hidaka, and Tohru Marunouchi

681 **Metabolism of Exogenous Leukotrienes by Cultured Human Keratinocytes** Joseph G. Morelli, David A. Norris, M. Bradley Lyons, and Robert C. Murphy

685 **Anti-*Mycobacterium Leprae* Monoclonal Antibodies Cross-React with Human Skin: An Alternative Explanation for the Immune Responses in Leprosy** Bernard Naafs, Arend H.J. Kolk, Roel A.M. Chin A Lien, William R. Faber, Grietje Van Dijk, Sjoukje Kuijper, Ernst Stolz, and Theodoor Van Joost

689 **Patients with Erosive Lichen Planus May Have Antibodies Directed to a Nuclear Antigen of Epithelial Cells: A Study on the Antigen Nature** Aurora Parodi and P.P. Cardo

694 **Polyamine-Dependent Post-Translational Modification of Proteins in Differentiating Mouse Epidermal Cells** Mauro Piacentini, Maria Grazia Farrace, Marzia Imparato, Lucia Piredda, and Francesco Autuori

700 **Immunogold Staining of Intermediate-Sized Filaments of the Vimentin Type in Human Skin: A Postembedding Immunoelectron Microscopic Study** Klemens Rappersberger, Max Binder, Eva Zonzits, Ursula Hornick, and Klaus Wolff

706 **Tumor Necrosis Factor α Induces Invasiveness of Human Skin Fibroblasts In Vitro** Carl Georg Schirren, Karin Scharffetter, Rüdiger Hein, Otto Braun-Falco, and Thomas Krieg

711 **Analysis of Dose Response of Trinitrochlorobenzene Contact Hypersensitivity Induction in Mice: Pretreatment with Cyclophosphamide Reveals an Optimal Sensitizing Dose** Sabra Sullivan, Paul R. Bergstresser, and J. Wayne Streilein

717 **All-Trans Retinoic Acid Stimulates Growth and Extracellular Matrix Production in Growth-Inhibited Cultured Human Skin Fibroblasts** James Varani, Raj S. Mitra, Douglas Gibbs, Sem H. Phan, Vishva M. Dixit, Rajorshi Mitra, Tamara Wang, Karl J. Siebert, Brian J. Nickoloff, and John J. Voorhees

724 **Distribution of Fodrin in the Keratinocyte In Vivo and In Vitro** Kozo Yoneda, Toyoshi Fujimoto, Sadao Imamura, and Kazuo Ogawa

LETTERS TO THE EDITOR

730 **Alkanes: Endogenous or Exogenous?** Peter M. Elias and Mary L. Williams

731 **Reply** Jeffrey T. Bortz, Philip W. Wertz, and Donald T. Downing

731 **Follicular Penetration and Distribution of Topically Applied CD 271, a New Naphthoic Acid Derivative Intended for Topical Acne Treatment** Jean-Claude Jamoulle, Lydia Grandjean, Evelyne Lamaud, Braham Shroot, and Hans Schaefer

BOOK REVIEW

732 **Basics of Dermatology, A Colour Atlas. By Heide-Marie Heinz.** Kathleen David

JUNE 1990 VOLUME 94 NUMBER 6

IN THIS ISSUE . . .

733 J. Clark Huff

REPORTS

735 **Potent Inflammatory Properties in Human Skin of Interleukin-1 Alpha-Like Material Isolated from Normal Skin** Richard Camp, Nicholas Fincham, Janet Ross, Christopher Bird, and Andrew Gearing

742 **Immunolocalization of Epidermal Growth Factor Receptors in Normal Developing Human Skin** Lillian B. Nanney, Christa M. Stoscheck, Lloyd E. King, Jr., Robert A. Underwood, and Karen A. Holbrook

749 **Reconstituted Epidermis: A Novel Model for the Study of Drug Metabolism in Human Epidermis** Mai-Anh Pham, Jacques Magdalou, Gérard Siest, Marie-Cécile Lenoir, Bruno A. Bernard, Jean-Claude Jamoulle, and Braham Shroot

753 **Internalization and Acidification of Surface HLA-DR Molecules by Epidermal Langerhans Cells: A Paradigm for Antigen Processing** Giampiero Girolomoni, Ponciano D. Cruz, Jr., and Paul R. Bergstresser

761 **Tachykinins and Calcitonin Gene-Related Peptide in Oxazolone-Induced Allergic Contact Dermatitis in Mice** Lorens Ek and Elvar Theodorsson

764 **T-Cell Receptor-γ/δ Bearing Lymphocytes in Normal and Inflammatory Human Skin** Patrick Dupuy, Michèle Heslan, Sylvie Fraitag, Thierry Hercend, Louis Dubertret, and Martine Bagot

769 **Antigen Presentation and T-Cell Activation in Epidermodysplasia Verruciformis** Kevin D. Cooper, Elliot J. Androphy, Douglas Lowy, and Stephen I. Katz

777 **Effect of Basic Fibroblast Growth Factor (bFGF) and Insulin-Like Growth Factors Type I (IGF-I) and Type II (IGF-II) on Adult Human Keratinocyte Growth and Fibronectin Secretion** Neil W. DeLapp and Donna K. Dieckman

781 **An Action Spectrum for the Elicitation of Erythema in Skin Persistently Sensitized by Photobound 8-Methoxypsoralen** Bernhard Ortel and Richard William Gange

786 **Lymphocyte Migration into the Skin: The Role of Lymphocyte Homing Receptor (CD44) and Endothelial Cell Antigen (HECA-452)** Sirpa Jalkanen, Seppo Saari, Hannu Kalimo, Kaija Lammintausta, Eeva Vainio, Rauli Leino, Adrian M. Duijvestijn, and Kirsti Kalimo

793 **Studies of the Relationship of the 230-kD and 180-kD Bullous Pemphigoid Antigens** Mary Ann Robledo, Soo-Chan Kim, Neil J. Korman, John R. Stanley, Ramzy S. Labib, Shozo Futamura, and Grant J. Anhalt

798 **Lymphocyte Transformation Test for Diagnosis of Isothiazolinone Allergy in Man** Vera D.M. Stejskal, Margit Forsbeck, and Robert Nilsson

803 **Ultrastructural Observations on the Hair Bulb Melanocytes and Melanosomes in Acute Alopecia Areata** Desmond J. Tobin, David A. Fenton, and Marion D. Kendall

808 **Ultraviolet Light Induces Increased Circulating Interleukin-6 in Humans** Agatha Urbanski, Thomas Schwarz, Peter Neuner, Jean Krutmann, Reinhard Kirnbauer, Andreas Köck, and Thomas A. Luger

812 **The Relation Between Constitutional Skin Color and Photosensitivity Estimated from UV-Induced Erythema and Pigmentation Dose-Response Curves** Wiete Westerhof, Oscar Estevez-Uscanga, Joes Meens, Arthur Kammeyer, Muriel Durocq, and Irina Cario

817 **Identification of a 160-kD Molecule as a Component of the Basement Membrane Zone and as a Minor Bullous Pemphigoid Antigen** Xue-Jun Zhu, Yayoi Niimi, and Jean-Claude Bystryn

RAPID COMMUNICATION

822 **Low-Energy Helium-Neon Laser Irradiation Increases the Motility of Cultured Human Keratinocytes** Ann F. Haas, R. Rivkah Isseroff, Ronald G. Wheeland, Pamela A. Rood, and Phillip J. Graves

LETTERS TO THE EDITOR

827 **Collagen Metabolism in Ultraviolet Irradiated Hairless Mouse Skin and Its Correlation to Histochemical Observations** Sam Shuster, Stephen R. Plastow, and Anthony R. Young

828 **Reply** Lorraine H. Kligman, Robert Alper, and Nicolas A. Kefalides

829 **Reactivity of Sera from Bullous Pemphigoid Patients on Blotted Epidermal Extracts as Compared to Indirect Immunofluorescence Technique** Prof. U.-F. Haustein

JUNE 1990 VOL. 94 NO. 6, SUPPLEMENT

1S **Preface** Kirk D. Wuepper, S. Wright Caughman, John C. Ansel

2S **Interleukin-6: Molecular Pathophysiology** Pravinkumar B. Sehgal

7S **Fibronectin-Cell Interactions** John R. Couchman, Martin R. Austria, and Anne Woods

15S **Fc Receptors of Human Langerhans Cells** Didier A. Schmitt, Thomas Bieber, Jean-Pierre Cazenave, and Daniel Hanau

22S **Characterization and Functional Analysis of Inteferon-γ-Induced Intercellular Adhesion Molecule-1 Expression in Human Keratinocytes and A-431 Cells** S. Wright Caughman, Li Lian-Jie, and Klaus Degitz

27S **Interleukin-2 and the IL-2 Receptor: New Insights Into Structure and Function** William A. Kuziel and Warner C. Greene

33S **Cellular Mechanisms of TGF-β Action** Karin D. Rodland, Leslie L. Muldoon, and Bruce E. Magun

41S **Organ-Specific and Non-Organ-Specific Lymphocyte Receptors for Vascular Endothelium** Druie E. Cavender

49S **Fc Receptors for IgE and Interleukin-4 Induced IgE and IgG4 Secretion** Hans L. Spiegelberg

53S **Platelet-Derived Growth Factor Receptor: Current Views of the Two-Subunit Model** Charles E. Hart and Daniel F. Bowen-Pope

58S **TCR γ/δ^+ Dendritic Epidermal T Cells as Constituents of Skin-Associated Lymphoid Tissue** Robert E. Tigelaar, Julia M. Lewis, and Paul R. Bergstresser

64S **Structural and Functional Correlation of the Human Complement Receptor Type 1** Winnie W. Wong

68S **Biology of the Interleukin-1 Receptor** Steven K. Dower, Eva E. Qwarnstrom, Roy C. Page, Rebecca A. Blanton, Thomas S. Kupper, Elaine Raines, Russell Ross, and John E. Sims

79S **Identification of a Cell-Surface DNA Receptor and Its Association with Systemic Lupus Erythematosus** Steven H. Hefeneider, Robert M. Bennett, Tuan Q. Pham, Kenneth Cornell, Sharon L. McCoy, and Michael C. Heinrich

85S **The Role of Adhesion Molecules in Epithelial–T-Cell Interactions in Thymus and Skin** Kay H. Singer, Phong T. Le, Stephen M. Denning, Leona P. Whichard, and Barton F. Haynes

91S **The Biology of the T-Cell Antigen Receptor and Its Role in the Skin Immune System** Gerald Siu, Elizabeth A. Springer, and Stephen M. Hedrick

101S **Cytokine Modulation of Keratinocyte Cytokines** John Ansel, Patricia Perry, Jeffrey Brown, David Damm, Tuan Phan, Charles Hart, Thomas Luger, and Stephen Hefeneider

108S **The Use of Human T-Lymphocyte Clones to Study T-Cell Function in Allergic Contact Dermatitis to Urushiol** Richard S. Kalish

112S **CR2 Complement Receptor** Neil R. Cooper, Bonnie M. Bradt, Johng S. Rhim, and Glen R. Nemerow

118S **The Class II Major Histocompatibility Complex Antigen Deficiency Syndrome: Consequences of Absent Class II Major Histocompatibility Antigens for Lymphocyte Differentiation and Function** Loran T. Clement

122S **Studies of C3d,g in Normal Human Epidermal Basement Membrane** Kim B. Yancey and Nicole Basset-Séguin

128S **Fibronectin Matrix Deposition and Fibronectin Receptor Expression in Healing and Normal Skin** Richard A.F. Clark

135S **Role of Growth Factors, Cytokines, and Their Receptors in the Pathogenesis of Psoriasis** James G. Krueger, Jeffrey F. Krane, D. Martin Carter, and Alice B. Gottlieb

141S **The Human C3b Receptor: Function and Role in Human Diseases** Francisco Tausk and Irma Gigli

146S **The Activated Keratinocyte: A Model for Inducible Cytokine Production by Non-Bone Marrow–Derived Cells in Cutaneous Inflammatory and Immune Responses** Thomas S. Kupper

151S **The Role of Adhesion Molecules, Chemotactic Factors, and Cytokines in Inflammatory and Neoplastic Skin Disease—1990 Update** Brian J. Nickoloff, Christopher E.M. Griffiths, and Jonathan N.W.N. Barker

158S **Purification of the IL-2 Receptor (TAC) by Ligand-Affinity Chromatography and Utilization of the Immobilized Receptor for Receptor-Affinity Chromatography (RAC) Purification of IL-2, Mutant IL-2, and IL-2 Fusion Proteins** John E. Smart, Philip C. Familletti, David V. Weber, Ronald F. Keeney, and Pascal Bailon

164S **The EGF/TGFα Receptor in Skin** Lloyd E. King, Jr., Ronald E. Gates, Christa M. Stoscheck, and Lillian B. Nanney